

# Benny Moldovanu

## *Presentation Title*

### **Extreme Points and Majorization: Economic Applications** (with Andreas Kleiner and Phillip Strack)

## *Abstract*

We characterize the set of extreme points of monotonic functions that are either majorized by a given function  $f$  or themselves majorize  $f$  and show that these extreme points play a crucial role in many economic design problems. Our main results show that each extreme point is uniquely characterized by a countable collection of intervals. Outside these intervals the extreme point equals the original function  $f$  and inside the function is constant. Further consistency conditions need to be satisfied pinning down the value of an extreme point in each interval where it is constant. Finally, we apply these insights to a varied set of economic problems: equivalence and optimality of mechanisms for auctions and (matching) contests, Bayesian persuasion, optimal delegation, and decision making under uncertainty.

## *Affiliation*

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